

University College Cork

Mountaineering Club

Safety Procedures & Practices

Introduction

This guide is designed to prevent, rather than deal with, hazardous situations and accidents. It is intended to be a living document to be added to or modified to reflect the changing requirements of the club and current best practice in First Aid and Safety.

Its purpose is not to hinder someone from participating in the activities we promote but to ensure that they may enjoy the activity safely.

Background

The following common-sense principles underpin this document:

- BE PREPARED
- BE FLEXIBLE – MODIFY THE PLANS IF THE GROUP OR CONDITIONS MAKE IT NECESSARY
- IF YOU'RE UNEASY ABOUT SOMETHING, YOU PROBABLY SHOULDN'T BE DOING IT
- WHEN DOUBT, ASK SOMEONE MORE EXPERIENCED
- KEEP ON ASKING UNTIL THE QUESTION IS ANSWERED
- PLAY IT SAFE
- CHECK YOU'VE PACKED EVERYTHING – AS A MINIMUM:
 - ✓ A Waterproof jacket
 - ✓ Mountain Boots (Not Runners)
 - ✓ Thick socks
 - ✓ Gloves
 - ✓ A change of clothes in a separate bag (to be left on bus)
 - ✓ A Packed lunch
 - ✓ Lots of water (2+ litres)
 - ✓ A hat is also recommended.

This document also adheres to the relevant sections of the UCCMC's constitution:

- i. All Club meets shall have a leader.
- ii. All members participating at a meet abide by the decisions of the leader.
- iii. The leader shall act at all times to ensure the safety of the party to the best of his/her ability.
- iv. Leaders shall be approved and appointed by the Committee whose decision shall be based on an assessment of the candidate's experience and training.
- v. In the matter of leadership deference shall be paid to the advice of those having greater experience or holding recognised mountain leadership qualifications.

The UCC Mountaineering Club, hereafter referred to as the UCCMC, shall adhere to the following general guidelines

- In the event of an outdoor emergency situation, accepted first aid practices shall be applied by an individual qualified in First Aid (preferably Mountain/outdoor specific). This individual shall use their training, experience and personal judgement to best handle the situation in a manner that is as efficient and hazard-free as possible for themselves, the casualty, and the rest of the group.
- In the event of an indoor emergency situation, available bystanders are sent to alert Mardyke Arena/local area staff and, if required, emergency services. First aid shall be administered, if judged necessary, by an individual qualified in First Aid – preferably by the Mardyke Arena/local area first aider.
- The UCCMC committee, hereafter referred to as the committee, and club members in general shall be made aware at all available opportunities of the necessity of operating in a safe environment and shall be mindful of hazards, potentially dangerous situations and any means by which the risk from these may be removed or reduced.

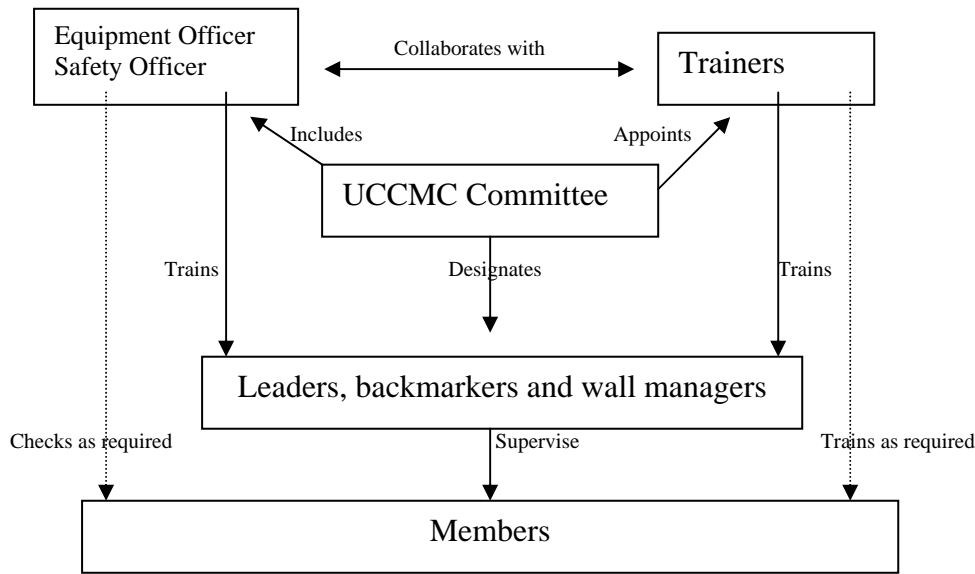
- The club shall run, solely or as a collaborative exercise, an outdoor/mountain specific First Aid course at least once every 2 years. A refresher course may be run on alternate years, subject to demand.
- The club shall promote safe practices. It will encourage club members to raise their skill levels by attending formal training courses (e.g. First Aid, navigation, Mountain skills, Single pitch award). It expects more experienced members to pass on their skills informally by mentoring and advising new club members.

Version history:

1.0 Gavin Dillon; Winter 2005; original version.

2.0 Gerard O'Sullivan (with contributions from Liam Calnan, John Carroll, Bryan Feeney, Jack Higgins, Ruaidhri Murphy, Conor Ryan & Emer Walker); Summer 2006.

Safety roles and responsibilities



Schematic of Safety Hierarchy within UCCMC

- I. Ultimate responsibility for personal safety rests with the individual. However, it is evident that lack of experience and training will inhibit perception of hazards. Because of this the UCCMC, its committee, and all leaders/wall managers designated by the committee shall ensure that good practice procedures shall be adhered to within their groups and shall be particularly alert that those new to the club are adequately equipped and monitored.
- II. The committee shall include both an Equipment Officer and a Safety Officer. These individuals shall be responsible for making available and maintaining club equipment, including climbing, mountain safety, personal protective, first aid and all other equipment necessary to run a safe club.
- III. In addition, the Safety Officer shall act as the primary contact and point of information for safety issues within the club, shall assiduously promote good safety practices, including awareness of this document by all authorised persons, and shall encourage precautionary checks.
- IV. The Safety Officer will keep a ‘near-miss’ records of concerns observed and reported by authorised persons and/or general club members. The Safety Officer will work with the Committee and appropriate trainers to address these issues and prevent reoccurrence.
- V. For the purposes of this document, an “authorised person” for a particular activity is defined as one of the following:
 - A committee member
 - A trainer for that activity
 - A walk leader (for mountaineering activities)
 - A climbing leader/wall manager (for climbing-related activities).
 A club member is any registered UCC student (including visiting students) or UCC staff member who chooses to take part in a club activity.
- VI. The club may designate certain individuals as trainers for a club activity. These shall be in possession of/ in training for a recognised qualification for the activity

and/or be widely recognised as having an outstanding level of experience in the required area. These shall work closely with the Safety Officer to define and maintain safety standards in their area. Due to the large club membership, it is expected that the trainers will primarily work with a small number of individuals (principally acting or aspirant leaders, backmarkers and/or wall managers, depending on their areas of expertise) but can take the opportunity, if time permits, to provide advice and/or training in their area to any individual within the club. The PE Office shall hold a record of current trainers.

- VII. All outdoor club meets shall have a leader or leaders. All indoor climbing sessions shall have a wall manager or managers. The leader(s)/ wall manager(s) shall use their personal judgement, based on experience, training and their awareness of established safety practices to organise the meet and shall ensure that all novices shall, in particular, be adequately supervised and be aware of relevant safety practices. The leader(s)/ wall manager(s) may request assistance from other club members as required to help manage the group and it is expected that any club member will assist if requested, unless the request clearly exceeds their capabilities/experience.
- VIII. All club members shall be encouraged to check as rapidly as possible with an appropriate authorised person if they have any safety queries
- IX. Any club member who observes what they believe to be a potentially hazardous situation or incorrect application of a procedure should alert the personnel involved immediately and bring the matter to the attention of an appropriate authorised person as soon as possible. The authorised person will confirm the observation and recommend corrective action, if required.
- X. If there is uncertainty as to the correct procedure to follow, clarification will be sought from a trainer in that area. If it is still unresolved, the committee will seek outside expertise to arbitrate.
- XI. If a club member seeks to bring non-member as a guest to a club event, the presence of this guest should be cleared with an appropriate authorised person beforehand and the guest should be made aware that they are unlikely to be covered by club insurance.
- XII. A non-member may act as leader with the prior approval of the committee, or in exceptional circumstances. In such a case, it still remains the non-members responsibility to arrange their own appropriate insurance cover.

Mountaineering Club Activities: Outdoor

For every outdoor event, the UCCMC shall adhere to the following guidelines:

- 1) Leaders should plan the day having regard to the weather forecast, local conditions, and ability/experience of the participants. In cases of multiple groups, leaders will consult with each other and with the backmarkers during route planning. It may be expedient, particularly where more than one vehicle is available, to plan for drop off/collection in different locations.
- 2) Leaders should, if possible, have considerable prior local experience of the area for the day.
- 3) Each group is to have at least 2 people with a valid First Aid qualification present if possible. This should include at least one outdoor/mountain specific (e.g. REC 2 or above) First Aid qualified person.
- 4) Clothing and equipment, or lack thereof, shall be reviewed before departure for intended destination for each person attending the outing by the committee or a representative thereof. An individual may be turned back from the outing by a committee member should they feel that the necessary equipment or clothing is not present. Grounds for refusal may include but are not limited to: inappropriate footwear; inappropriate weather-specific gear; wearing denim; lack of change of clothes; lack of adequate food and drink; insufficient experience, lack of fitness or ability to the extent that they will, in the view of the committee, be unable for the proposed routes or expected conditions; poor, unsafe or inappropriate conduct on previous club events; too many inexperienced people at the event (see 8 below); lack of appropriate climbing ropes, helmets, harnesses or belay devices etc (in the event of an outdoor rock-climbing excursion).
- 5) The intended routes for each group, and expected time of return, will be made known to the other leaders and to the bus driver waiting at the finish point. The committee and leaders will work together to ensure that the group gets to the start point at a reasonable time and that stops en route are kept brief and to a minimum.
- 6) Appropriate emergency contact equipment such as, but not limited to, mobile telephones, paging devices, radio contact devices (walkie-talkies) shall be carried by group leaders along with contact details for the bus driver, other bus drivers and applicable emergency services. If mobile phones are bought with the group, a least one phone should be fully charged, in credit and stored in a waterproof holder by either the leader or backmarker.
- 7) On journeys to/from the event, passengers shall defer to the instructions of the driver(s) and committee.

In addition to the above requirements, for every outdoor **mountaineering** event, the UCCMC shall adhere to the following guidelines:

- 8) Groups on the mountain shall be kept evenly distributed, as much as possible, and shall not exceed 25 people unless under exceptional circumstances to be decided by the committee. This is both to facilitate group management and to reduce environmental impact. The UCCMC reserves the right to cap the number of hikers allowed to attend an event if there are insufficient experienced leaders available to adequately control the groups.
- 9) At least 2 people in every group shall have completed a recognised navigation course.

- 10) One of the aforementioned people shall lead the group, except during training or under exceptional circumstances (to be decided by the committee) when 2 people may co-lead.
- 11) The committee may waive the requirement for formal navigation training in the case of individuals who have not yet had the opportunity to attend such training but are nonetheless, due to extensive personal experience, deemed to meet the required level of navigational skill. The PE office shall hold a list of any such persons. These individuals should be treated as a trainee for, as a minimum, their first 2 lead walks. This waiver is not renewable and is only valid for 1 year, by which time the individual should have attended an approved navigational course or been awarded a recognised mountaineering/navigation qualification.
- 12) A backmarker should be present in every group. The backmarker shall be appointed by the leader(s) of the group and shall be responsible for the closing of gates, protection of fences etc. The backmarker should have completed a recognised navigation course and, if not, should be someone of considerable experience with the mountains, the mountain in question, or more experience than a novice is deemed to have.
- 13) The leader and backmarker will plan the route together (see 1 above). Their route plan will, where the route is estimated more than 5 hours walking time, have at least one 'escape' option identified should conditions deteriorate. Each will keep a copy of the route card (see 5 above) and the backmarker shall be immediately consulted before any deviations/escapes are made from the planned route.
- 14) Compasses and the appropriate maps will be allocated to each leader of the group and to the backmarker.
- 15) Each group will have safety equipment including but not limited to: at least 1 First Aid kit (fully stocked), at least 2 head torches with fully operational batteries; at least 1 storm- shelter (Kishu); at least 2 bivouac sacks, preferably one of which is double size. Other equipment may be deemed necessary or unnecessary by the leader of the specific group or the committee.
- 16) The group shall not normally be split. If a split becomes desirable, it will only take place after consultation between the leader(s) and backmarker(s), ensuring that both subgroups are aware of each other's planned route(s) and that there is an appropriate level of equipment and experienced personnel in each group.
- 17) Individuals shall not normally be permitted to leave the group. Individual(s) seeking to turn back or break away may only do so after prior agreement with the leader(s) and after ensuring the backmarker is aware of their departure.
- 18) If an individual has to turn back because of physical injury or inability, a person of sufficient experience should accompany them with a specified safe route, with all sufficient safety equipment. In extreme events, it may be necessary for the whole group to accompany the individual(s).

In addition to the above requirements, for every outdoor **climbing** event, the UCCMC shall adhere to the following guidelines:

- 19) An individual shall be designated as leader by the Committee, or by general consensus within the group. This individual should be preferably in possession of/be in training for a recognised climbing qualification (SPA or higher). If not, the individual should have considerable climbing experience.
- 20) The leader shall inform the group of departure times. They shall advise, or receive advice from, other experienced climbers within the group if required. They shall

ensure that any inexperienced climbers present observe good practice including but not limited to:

- Use of personal protective equipment (harnesses, helmets, and belay/abseil devices).
 - Use of safety systems near crag edges
 - Use of approved safety systems while abseiling (prusik/locking devices, safety rope or another person controlling abseil rope from beneath (bottom safety)).
- 21) Each group will have safety equipment including but not limited to: at least 1 First Aid kit (fully stocked). Other equipment may be deemed necessary or unnecessary by the leader of the specific group or the committee.

Mountaineering Club Activities: Indoor

For indoor climbing sessions, the UCCMC shall adhere to the following guidelines:

- a) The committee shall nominate wall managers, at least one of whom shall be on duty for each club climbing session. The wall managers shall use their personal judgement, based on experience, training and their awareness of established safety practices to organise the session and shall ensure that all novices, in particular, shall be supervised and be aware of relevant safety practices.
- b) Novices may only be admitted to the climbing area if the wall manager is present and if the number of novices does not exceed preset levels.
- c) The wall manager(s) may request assistance from other club members as required to help manage the group and it is expected that any club member will assist if requested, unless the request clearly exceeds their capabilities/experience.
- d) Designated trainers (see V above) shall be in possession of/in training for a Single Pitch Award (SPA) or higher OR have acquired experience, trustworthiness and ability significantly above the standard level of UCCMC practice and ability.
- e) No novice climber should attempt to climb or to belay another climber without having been previously making their presence known to the wall manager and having been assessed by an authorised person or designate thereof. This may include, but need not be limited to, correct use of equipment, appropriate knot tying on procedures, appropriate belaying technique. Emphasis will be made on the importance of mutual and continual checking.
- f) Particular attention needs to be given to the following situations:
 - Belaying for the first occasion
 - Belaying a lead-climber for the first occasion.
 - Abseiling for the first occasion.
 - Leading a sports route for the first occasion

In each of these cases, the aspirant climber/abseiler/belayer should be closely monitored by a committee member, designated trainer, or wall manager. Other individuals may assist as required – see b) - but should NOT be solely responsible for supervision in these cases. The aspirants should also be monitored on subsequent repeats until their skill and confidence has increased to a level whereby the level of monitoring may decrease.

- g) While the wall manager and other helpers cannot be all-seeing or all-knowing, they should recognise that most problems arise from the following scenarios:
 - Someone who has not been adequately trained
 - Someone disregarding wall procedure e.g. bouldering underneath a climber
 - Someone who can't remember the correct procedure but is too timid or overconfident to check
 - A climbing pair who have not performed a mutual checking procedure
 - An experienced climber who - through adrenalin, nerves or overenthusiasm - becomes careless and eg. misses a clip.
- h) The UCCMC shall, where practicable, attempt to supply its own equipment including but not limited to: ropes; belay devices; karabiners; harnesses etc. and shall not abuse the equipment owned by the Mardyke Arena/alternate venue used.
- i) All aforementioned equipment shall be checked on a regular basis to assure its usability and safety – this shall be done by the Equipment Officer and/or Safety Officer and/or designated trainer.

- j) The staff at the climbing wall at the Mardyke Arena (or alternate venue used) shall have the final adjudication on safety practices during UCCMC sessions. Such practices may include but are not limited to: correct and appropriate knot tying on procedures, appropriate belaying technique; wall etiquette.

Appendices

All internet links checked and verified as operational, August 2006

Appendix I

On estimating times – Naismith’s Rule and Tranter’s corrections

Naismith's Rule was devised in 1892 by W.W.Naismith, a Scottish mountaineer, as an aid to estimating the length of time it would take to walk a predefined walking route including ascents and descents. It assumes good general fitness, conditions and no stops and thus can be considered as the minimum time required to complete the planned route.

It assumes an average speed of 5km per hour plus 1/2 hour for every 300 metres of ascent. Corrections for short distances:

- going gently downhill - 10mins / 300m of descent
- very steeply downhill + 10mins / 300m of descent

In a party the time should be calculated for the slowest person.

Tranter's corrections make adjustments for fitness and fatigue. Fitness is determined by the time it takes to climb 300m over a distance of ½ mile (800 m). Additional adjustments for poor terrain or conditions can be estimated by dropping one or more fitness levels.

Fitness (minutes)	Time (hrs) estimated by Naismith’s rules											
	2	3	4	5	6	7	8	9	10	12	14	16
15 (v fit)	1	1.5	2	2.75	3.5	4.5	5.5	6.75	7.75	10	12.5	14.5
20	1.25	2.25	3.25	4.5	5.5	6.5	7.75	8.75	10	12.5	15	17.5
25	1.5	3	4.25	5.5	7	8.5	10	11.5	13.25	15	17.5	
30	2	3.5	5	6.75	8.5	10.5	12.5	14.5	DO NOT ATTEMPT			
40	2.75	4.25	5.75	7.5	9.5	11.5						
50 (unfit)	3.25	4.75	6.5	8.5								

For example, if Naismith's Rule estimates a journey time of 9 hours and your fitness level is 25, you should allow 11.5 hours.

An online estimator of walking times is available at:

www.walkhigh.co.uk/acatalog/Naismith_Calculator.html

Appendix II

Advice for leaders – culled from the experience of previous generations:

Plan the route as far in advance as you can and keep the route card safe and dry.

Bring extra food – people will run out.

Bring spare hats and gloves if possible – someone will forget theirs.

Keep within sight of the backmarker and keep him/her involved and abreast of any changes in plan.

If there are several experienced walkers in the group, encourage them to disperse through the group rather than all bunching together at the front.

Read this document.

Check the available safety gear is in the group.

And from <http://www.fs.fed.us/r3/recreation/safety/index.shtml>

- Plan Carefully
 - Get a Weather Report
 - Check with Authorities
 - Go Properly Equipped
 - Get Acclimated
 - Leave Information with Family or Friends
 - Learn the Limitations of Each Member
 - Keep the Party Together
 - Use Caution Crossing Rivers
 - Beware of Loose Rock
 - Get Off Exposed Ridges During Storms
 - Emergency Signals
- **Distress** - 6 evenly spaced signals. Repeat as required.
- **Acknowledgment** - 3 signals given in quick succession.

Appendix III

Risk calculator nomograms

Level	Economic	Personal	Public Reaction	Environmental
I	<1k	Insignificant < 3 days lost time	None/Mild	Insignificant
II	<10k	Minor < 28 days lost time	Minor Local Outcry	Temp. Short Term Damage
III	<100k	Major 28+ lost days or permanent slight incapacity	Considerable Local & National Media Reaction	Major Pollution
IV	<1m	Severe Permanent incapacitating injury/ illness	Severe Local & Substantial Media Reaction	Severe Pollution
V	>1m	Fatal	Severe National Media Reaction	Widespread Damage
VI	total	Multiple fatalities	Severe National Media Pressure to Stop Business	Catastrophic Damage

Explanation of risk consequences: -

<http://www.ucc.ie/services/safety/RiskCalculator.htm>